

1 Harris

Denise Gabuzda *Question* Could the possible increase in the flux of knot D in M87 represent a flare that is associated with the large flare in knot HST-1, but with a time delay (due to propagation time for example)?

Answer No; propagation time is too long. $2''$ separation \rightarrow 150pc projected and 16 Mpc distance of M87. Angle to los ~ 15 degrees so physical length ~ 450 pc therefore separation (physical) ~ 1400 lightyears and expected delay is beaming factor 4 would be $1400/4 \approx 350$ years ie you would need to have $\Gamma \sim 1400$ to make this work (Γ = Lorentz factor of jet)